REMARKS

Claims 1, 9, 17, 26 and 30 of the patent application were presented for examination. In the Office Action of September 17, 2007, claims 1, 9, 17, 26 and 30 were rejected. The claims, as amended, are listed above. No new matter has been added. Accordingly, claims 1, 9, 17, 26 and 30 are now pending for examination.

Applicants respectfully requests reconsideration of the pending claims and respond to the Office Action as follows:

Claim Rejections Under 35 U.S.C. § 101

In paragraph 5 of the Office Action, claim 17 was rejected under 35 U.S.C. § 101 because the claim is allegedly directed at a simple, abstract idea which is not statutory subject matter. Examiner also states that a claim that solely calculates a mathematical formula or a computer disk that solely stores a mathematical idea is not directed to the type of subject matter eligible for patent protection. Applicants respectfully disagree with the rejection.

Claim 17 is directed to a database system which is a machine in accordance with 35 U.S.C. § 101. The database system further comprises a table and a hidden timestamp column. The table further comprises a plurality of rows. The hidden timestamp column further comprises timestamp values. The timestamp is used to control a locking scheme in an application. In summary, the database system itself is patentable subject matter. Furthermore, the database system does not solely calculate mathematical formulas, but instead, is configured to produce a table with a hidden timestamp column, information in the hidden timestamp column being configured specifically for use in an application. Thus, Applicants respectfully request that the rejection be withdrawn.

Claim Rejections Under 35 U.S.C. § 103(a)

In paragraph 6 of the Office Action, claims 1, 9, 17, 26 and 30 were rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent 6,882,994 Yoshimura et al. (Yoshimura), in view of US Patent 6,999,977 issued to

Norcott et al. (Norcott), in view of US Patent 5,812,840 issued to Shwartz (Schwartz), and further in view of Applicant Admitted Prior Art (APA). Applicants respectfully traverse the rejections.

Independent claim 1, as amended, is representative of independent claims 9 and 17, as amended. Claim 1 recites a method for providing a timestamp for data in a database system, the database system operating in accordance with a database schema. The method comprises:

> providing a table in the database system, the table including a plurality of rows of data;
>
> providing a hidden timestamp column in the table in the database system, the hidden timestamp column including a timestamp value for each row of data in the table, the timestamp value indicating a last time a corresponding row of data in the table was previously modified, <u>wherein the hidden timestamp column does not appear in the database schema by default and exposes the timestamp value for a given row of data in the table only to a query that calls the timestamp column by name;</u>
>
> receiving a query from an application to obtain a timestamp value from the hidden timestamp column, the query calling the timestamp column by name; and
>
> <u>in response to the query, the hidden timestamp column returning the timestamp value to the application for use by the application,</u> wherein the application uses the returned timestamp value from the hidden timestamp column for controlling a locking scheme associated with recording data updates in the database system.

Advantageously, the timestamp column operates with low overhead, is available for all tables in a database system, and avoids problems raised by applications that do not expect a timestamp column.

Yoshimura generally discloses a technique for answering a user's query to a database system (Abstract). As relied upon by the Office Action, Yoshimura further discloses:

> Generally, no data updated timestamp is included as a data item of any table in a relational database. However, there is a technique that uses a timestamp of a data registration/updating [ ] for each data item in case a

plurality of data tables existing in a database or different databases are integrated into one table in a database system. (1:19-25)

Yoshimura continues to disclose a data freshness manager to update the last update time in a data freshness table that is separate from the database table (1:32-36). Thus, Yoshimura discloses that no updated timestamp is provided in a database table.

However, Yoshimura fails to disclose the invention as recited in claim 1. For example, claim 1 recites a "hidden timestamp column [that] does not appear in the database schema by default and exposes the timestamp value for a given row of data only to a query that calls the timestamp column by name." To the contrary, the data registration/updating of Yoshimura merely discloses a technique to use in place of a timestamp. In fact, the same citation in Yoshimura explicitly teaches away from a timestamp column in stating that generally "no data updated timestamp is included as a data item of any table in a relational database." Moreover, Yoshimura fails altogether to address providing timestamp values "only to a query that calls the timestamp column by name." Consequentially, Yoshimura fails to disclose the hidden timestamp column of claim 1.

In addition, Yoshimura fails to disclose the "hidden timestamp column returning the timestamp value to the application" as recited in claim 1. The timestamp value of claim 1 is returned from the timestamp column. Meanwhile, Yoshimura teaches away from a hidden timestamp column altogether, so it cannot rely upon the hidden timestamp column for returning timestamp values. The data freshness manager of Yoshimura uses a table separate from the database table, and requires extra processing overhead when compared to the integrated hidden timestamp column of claim 1.

As acknowledged by the Office Action, Yoshimura also fails to disclose an application that uses the "returned timestamp value from the hidden timestamp column for controlling a locking scheme" as recited in claim 1.

The combined disclosures of Norcott, Schwartz and APA, either alone or in combination. fail to cure the deficiencies of Yoshimura. Norcott is generally directed to a method to change data captured in which modifications made to on-line transaction processing tables are maintained in a change table. Schwartz is generally directed to a database query system including a query assistant that permits the user to enter only queries that are both syntactically and semantically valid. Finally, the APA of the Background of the Invention fails to contemplate the use of timestamp values from a hidden timestamp column, for use in controlling locking schemes. Moreover, the Background of the Invention further states that the non-hidden timestamp column relied upon by these applications in some cases, can be a drawback in other cases. Thus, the Background of the Invention teaches away from, and fails to contemplate, a hidden timestamp column.

Therefore, Applicant submits that independent claim 1 is patentable over Yoshimura, Norcott, Schwartz and APA, either alone or in combation, and the other prior art of record. Similarly, independent claims 9 and 17, and related dependent claims, are patentable for at least the same reasons as claim 1

CONCLUSION

Applicants' attorney believes this application is in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

January 17, 2008

/Joseph A. Sawyer, Jr./

Joseph A. Sawyer, Jr.
Reg. No. 30,801

Customer Number 45728
(650) 493-4540
(650) 493-4549